

IN THE CLAIMS

1. (Currently amended) A conversion circuit component which mates to a base socket, comprising:

a sealed unit body;

a sensor conversion and transmission circuitry enclosed by said body;

a display enclosed by said body ; and

a plurality of electrical contacts mounted on said body, including a first plurality of contacts for interaction with an external sensor and a second plurality of contacts for interaction with an external link,

wherein the external link comprises a data link supplying DC power to the transmission circuitry.

2. (Original) A component according to claim 1, wherein said plurality of electrical contacts mate with a plurality of electrical pressure contacts located on said base socket.

3. (Original) A component according to claim 1, wherein said body forms together with said base socket a quick connector for quick electrical connection of said body to said socket.

4. (Original) A component according to claim 1, wherein said circuitry is designed to mount in an industry standard connection head.

5. (Original) A component according to claim 1, wherein said circuitry is designed to interface with an industry standard sensor.

6. (Original) A component according to claim 1, wherein said circuitry is designed to interface with an industry standard link.

7. (Original) The component according to claim 1 wherein the base socket is comprised of:

a body adapted to mount inside a standard connection head of an industrial sensing probe and be attached via standard connection means of said connection head;

a plurality of terminals for attaching wires associated with said probe to said socket;

a plurality of contacts, each associated with one of said wires; and
a mechanical lock adapted to engage and align a circuitry component such that said contacts align with contacts of said circuitry.

8. (Original) A component according to claim 1, wherein said display is on a same side of said body as at least some of said contacts.

9. (Original) A component according to claim 1, wherein said display is on an opposite side of said body from said contacts.

10. (Original) The component according to claim 1 further comprising a third plurality of contacts for interaction with an external programmer.

11. (New) A component according to claim 1 wherein the external link comprises a 4-20 mA link.

12. (New) A component according to claim 1 wherein the external sensor is adapted to sense pressure.

13. (New) A component according to claim 1 wherein the external sensor is adapted to sense temperature.

14. (New) A method for monitoring an industrial process comprising:
providing a factory including industrial machines;
sensing the industrial process of each of said machine by inserting an industrial sensing probe in an opening in said machine;
mounting a base socket to said sensing probe; and
connecting a sensor conversion and transmission circuitry to said base socket using a quick connection.

15. (New) A method according to claim 14 wherein the industrial sensing probe senses at least one of temperature and pressure.

16. (New) A method according to claim 14 wherein said circuit can be removed from the base socket by performing not more than three separate acts.

17. (New) A method according to claim 14 wherein said circuit can be connected to the base socket by performing not more than three separate acts.

18. (New) A method according to claim 14 wherein said circuitry further encloses a display.

19. (New) A method for monitoring an industrial machine comprising:
providing an industrial machine;
sensing at least one of temperature and pressure of said machine by an industrial sensing probe inserted through an opening in said machine;
mounting a base socket to said sensing probe; and
connecting a sensor conversion and transmission circuitry to said base socket using a quick connection.

20. (New) A method according to claim 19 wherein said circuit can be removed from the base socket by performing not more than three separate acts.